

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of :  
Hidenobu HAMADA : **Mail Stop: PCT**  
Serial No. NEW : Attorney Docket No. 2005-0795A  
Filed May 13, 2005 :

OPTICAL DEVICE, OPTICAL DEVICE  
MANUFACTURING METHOD, AND  
OPTICAL INTEGRATED DEVICE  
[Corresponding to PCT/JP2004/007136  
Filed May 19, 2004]

THE COMMISSIONER IS AUTHORIZED  
TO CHARGE ANY DEFICIENCY IN THE  
FEES FOR THIS PAPER TO DEPOSIT  
ACCOUNT NO. 23-0975

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to the provisions of 37 CFR 1.56, 1.97 and 1.98, Applicant requests consideration of the references listed on attached form PTO-1449 and any additional information identified below in paragraph 3. A legible copy of each reference listed on the Form PTO-1449 is enclosed, except a copy is not provided for:

- ☒ each U.S. Patent and U.S. Patent application publication;
- ☐ each reference previously cited in the international application  
PCT/\_\_\_\_\_; and/or
- ☐ each reference previously cited in prior parent application Serial No.  
\_\_\_\_\_.

1a. ☒ This Information Disclosure Statement is submitted:

within three months of the filing date (or of entry into the National Stage) of the  
above-entitled application, **or**

ATTACHMENT D

before the mailing of a first Office Action on the merits or the mailing of a first Office Action after the filing of an RCE,

**and thus no certification and/or fee is required.**

1b. ☐ This Information Disclosure Statement is submitted

after the events of above paragraph 1a and prior to the mailing date of a final Office Action or a Notice of Allowance or an action which otherwise closes prosecution in the application, and thus:

(1) ☐ the certification of paragraph 2 below is provided, **or**

(2) ☐ the fee of \$180.00 specified in 37 CFR 1.17(p) is enclosed.

1c. ☐ This Information Disclosure Statement is submitted:

after the mailing date of a final Office Action or Notice of Allowance or action which otherwise closes prosecution in the application, and prior to payment of the issue fee, and thus:

**the certification of paragraph 2 below is provided, and**

**the fee of \$180.00 specified in 37 CFR 1.17(p) is enclosed.**

2. It is hereby certified


a. ☐ that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the Statement, or

b. ☐ that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in §1.56(c) more than three months prior to the filing of the Statement.

3. ☐ Consideration of the following list of additional information (including any copending or abandoned U.S. application, prior uses and/or sales, etc.) is requested.
4. For each non-English language reference listed on the attached form PTO-1449, reference is made to:
- a. ☐ a full or partial English language translation submitted herewith,
  - b. ☒ a foreign patent office search report (in the English language) submitted herewith,
  - c. ☒ the concise explanation contained in the specification of the present application at pages 8 & 9,
  - d. ☒ the concise explanation set forth in the attached English language abstract,
  - e. ☒ the concise explanation set forth below or on a separate sheet attached to the reference:  
U.S. 5,410,625 corresponds to WO 92/11550  
WO 92/11550 corresponds to JP 3370667
5. ☒ A foreign patent office search report citing one or more of the references is enclosed.

Respectfully submitted,

Hidenobu HAMADA

By   
Nils E. Pedersen  
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May 13, 2005

Sheet 1 of 2

## INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)  
(Use several sheets if necessary)

Date Submitted to PTO: May 13, 2005

ATTY DOCKET NO.  
2005-0795ASERIAL NO.  
NEW

10/534835

APPLICANT  
Hidenobu HAMADAFILING DATE  
May 13, 2005

GROUP

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	5,410,625					
	AB	3,614,197	10/1971	Nishizawa et al.			
	AC	4,087,159	5/1978	Ulrich			
	AD	4,950,045	8/1990	Bricheno et al.			

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO	
	AC	11-84434	3/1999	JP			abstract	
	AD	2001-183710	7/2001	JP			abstract	
	AE	92/11550	7/1992	WO			abstract	
	AF	2000-111738	4/2000	JP			abstract	
	AG	3370667	11/2002	JP				
	AH	2000-329962	11/2000	JP				
	AI	2001-147351	5/2001	JP				
	AJ	2003-50330	2/2003	JP				
	AK	1-156703	8/1990	JP				
	AL	8-201648	8/1996	JP				

## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

	AM	Lucas B. Soldano et al., "Optical Multi-Mode Interference Devices Based on Self-Imaging: Principles and Applications", Journal of Lightwave Technology, April 1995, Vol. 13, No. 4, pgs. 615-627.
	AN	K.-C. Lin et al., "Guided-wave 1.3/1.55 $\mu$ m wavelength division multiplexer based on multimode interference", Electronics Letters, July 4, 1996, vol. 32, No. 14, pages 1259-1261.
	AP	Baojun Li et al., "Low-Loss 1x2 Multimode Interference Wavelength Demultiplexer in Silicon-Germanium Alloy", IEEE Photonics Technology Letters, May 1999, Vol. 11, No. 5, pgs. 575-577.

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of form with next communication to applicant.

Sheet 2 of 2		INFORMATION DISCLOSURE STATEMENT					
FORM PTO 1449 (modified)  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  LIST OF REFERENCES CITED BY APPLICANT(S) (Use several sheets if necessary)  Date Submitted to PTO: May 13, 2005			ATTY DOCKET NO. 2005-0795A		SERIAL NO. NEW <span style="font-size: 1.5em; font-weight: bold;">10/534835</span>		
			APPLICANT Hidenobu HAMADA				
			FILING DATE May 13, 2005			GROUP	
U.S. PATENT DOCUMENTS							
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	AJ	2003-43285	2/2003	JP			
	AK	62-35304	2/1987	JP			
	AL						
	AM						
	AN						
OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)							
	AO	F. Rottmann et al., "Integrated-Optic Wavelength Multiplexers on Lithium Niobate Based on Two-Mode Interference", Journal of Lightwave Technology, Vol. 6, No. 6, June 1988, pgs. 946-952.					
	AP	M.R. Paiam, "Compact Planar 980/1550-nm Wavelength Multi/Demultiplexer Based on Multimode Interference", IEEE Photonics Technology Letters, Vol. 7, No. 10, October 1995, pgs. 1180-1182.					
	AQ						
EXAMINER				DATE CONSIDERED			

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of form with next communication to applicant.